

The Files, Project [ ] (RS-13)

24 November 1954 50X1

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Progress and Status of, at Laboratory.

REF: (a) Schedule A (Comparison of Frequency Shift and On-Off Keying)  
 (b) Memorandum to the Files, dated 14 October 1954, by [ ]

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1. A conference was held at the Laboratory on 18 November 1954, to review the progress of Phase One of Reference (b). Those attending were Messrs. [ ] of the Laboratory, [ ] OC-E/SAG, and [ ] of R&D-EP.

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2. It was noted in the preparation for Phase One that several difficulties were encountered which necessitate a revision of Schedule A tests, and a rerun of Phase One. Phases two and three will consequently be delayed.

3. The major factors contributing to the initial technical difficulties were the malfunctioning of the Magnacorder Magnetic Tape Recorder and the McElroy Tape Keyer. An Ampex Model 350 console type has been supplied by OC-SP/AF in place of the Magnacorder. A new McElroy Keyer type ADK, for 300 wpm keying is being requisitioned. An exciter is being obtained from NEMS to supplant the modified 05/FR unit at the Laboratory.

4. After a study of tapes developed under Phase One, it was resolved that the speed reduction from 300 wpm to 18.75 wpm should be accomplished with a minimum of redubbing, preferably from 30 inches per second tape speed to 1.875 inches per second in one operation. Because of equipment limitations at the Laboratory, the tape will be initially recorded at 7.5 I.P.S. It will then be necessary for the tape to be redubbed to 30 inches per second before reduction to 1.875 I.P.S. The final tape will result in a redubbing from 1.875 to 7.5 I.P.S., in order to be compatible for equipment available for playback in Phase Three.

5. It will be necessary for the Laboratory to design and construct a mixing device for employment with a filter and audio oscillator for developing a 1000 cycle resultant of a FSK signal. It will also be necessary for the Laboratory to design and construct an amplifier and wave shaping circuit for converting a 62.5 cycle sine wave to a square wave to be employed in conjunction with an 812.5 cycle filter and amplifier for final play back use.

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6. Upon receipt of the new McElroy ADK Keyer and upon completion of construction of equipment outlined in Paragraph 5, the Laboratory will again run a series of magnetic test tapes without injected interference for purposes of resolving the problems prior to operator participation.

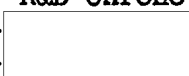



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Lab/JGB/jcm (22 November 1954)

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